EVENT TIMELINE

8:00 am
Welcome by Karen Plaut, Executive Vice President for
Research and Partnership, Purdue University

8:05 am
SMART Overview by Ali Shakouri

8:08 am
New Initiatives by Mustafa Hussain
· CHIPS Act: Purdue and SMART responses

8:15 am
Key applications areas

(Linnes, Verma, Stanciu, Rahimi, C.-H Lee, H. Lee)
**SMART faculty present their review of recent advances, key gaps and emerging
opportunities in three applications.**
· **Precision point-of-care diagnostic devices** (DNA, viruses, etc.)
· **Low-cost sensors for digital agriculture and food quality and safety**
· **Printing technology enabled healthcare devices** (wearables, implantables)
· **Industry Feedback:** applications pull

9:15 am
Common technologies
(Cakmak, Alam, Mohammadi and Hussain)
· **Baselines for R2R Printed Electronics:** one of the first projects is to print hundreds
of antennas, RFID and capacitor structures. Their material and process can be
changed as needed for similar volume and neck-to-neck comparison for rapid
prototyping to mid-scale volume production
· **Common Platform Technology:** integrated system solutions for sensing:
networking/ communication, RF powering/capacitor storage
· **Data analytics:** reliable sensing in uncertain and harsh environment
· **Industry Feedback:** partnership opportunities

9:45am -10:00am Break

10:00 am
NSF / AnalytixIN AI in Manufacturing update
(Shakouri and Alam)
· **AI Commons** (privacy-preserving ML and data aggregation to improve
manufacturing resiliency and competitiveness)
· **TinyML sensors** (edge analytics for real-time productivity monitoring and anomaly
detection)
· **IoT workshops for industry** (low-cost open-source IoT solutions for SMEs)

10:30 am
Student Lightening Talks

11:30 am -1:30pm
Poster Session, Demonstrations, Networking and Lunch
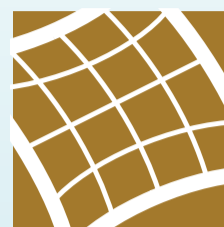
11:30-11:45 am
R2R baseline manufacturing demo in the lab
(Glassmaker and Cakmak)

1:30-4pm Closed Session
(Only SMART Consortium company members)
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PURDUE
SMART
scalable manufacturing of
aware & responsive thin films

SMART Industry Day
Thursday May 11, 2023
Purdue Birck
Nanotechnology Center

*Engage with SMART
to translate ideas into
prototypes*

shakouri@purdue.edu
mmhece@purdue.edu

Purdue SMART
Birck Nanotechnology Center 1205 W. State St.
West Lafayette, IN 47907

https://engineering.purdue.edu/SMART